

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 16 MAR 2004

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Applicant's or agent's file reference TAB/58262/005	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/00218	International filing date (day/month/year) 22.01.2003	Priority date (day/month/year) 25.01.2002
International Patent Classification (IPC) or both national classification and IPC B41M3/14		
Applicant DE LA RUE INTERNATIONAL LIMITED ET AL.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of 2 sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 28.07.2003	Date of completion of this report 16.03.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Whelan, N Telephone No. +31 70 340-3910 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/00218

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

Description, Pages

1-13 as originally filed

Claims, Numbers

8-24 as originally filed

1-7 received on 06.01.2004 with letter of 06.01.2004

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/GB 03/00218**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	8-12,14,16-20
	No: Claims	1-7,13,15,21-24
Inventive step (IS)	Yes: Claims	
	No: Claims	1-24
Industrial applicability (IA)	Yes: Claims	1-24
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

D1: US-B1-6 318 758

D2: WO 00 39391 A

D3: EP-A-0 319 157

1.

D1 (see in particular column 2, lines 33-53; figure 2 in combination with column 4, line 62-column 5, line 30) describes a substrate comprising a translucent or transparent plastic layer (carrier film) , a discontinuous metal layer (layer 4 see Fig. 2 and column 5, lines 24-26), a discontinuous magnetic layer (layer 5 see Fig. 2 and column 5, line 23) and a layer comprising liquid crystal pigments (layer 6 see fig. 2 and column 5, line 29).

(see also Figure 2 in D1 in comparison with Figure 4 of present invention, ignoring layer 16 as this layer is not essential). The substrate described in D1 comprises therefore all the features of present claim 21.

The features of claims 22-24 are also described in D1.

Hence the subject-matter of claims 21-24 does not appear to be novel (Art 33 (2) PCT).

2.

D1 (see column 6, lines 22-38, see figure 6) describes many methods for producing the above substrates. Some of these methods comprise applying a resist (with adhesive ink resistant to solvent (layer 12 in D1)) to a magnetic layer (layer 5 in D1) on a first side of the transparent carrier, removing (dissolving process) partly the magnetic layer from the areas not covered by the resist and applying cover layer (layer 6) which can comprise liquid crystal material (see column 5, line 29) and semitransparent layers are also conceivable. D1 further describes a demetallisation process for selectively removing areas of a metallic

coating by using applying a resist (solvent resistant ink) over the metal layer (cover layer 6) and detaching the layer structure (see column 7, lines 61-66). The ink for the resist is not further described but it is implicit that the ink would include also ("dark") coloured inks which is a normal possibility for ink, especially if it is used under a semitransparent liquid crystal layer. Present claim 1 does not give either any more details over the type of polymeric liquid crystal material. Therefore all the steps of the method of present claim 1 seem to be described in D1.

Therefore present claims 1 and 21-24 do not appear to satisfy the criterion set forth in Article 33(2) PCT in the light of D1.

In the event that present claim 1 would have been regarded as novel, the subject-matter could not have been regarded as inventive as the only potential difference would have been that the ink for the resist is said to be "dark" coloured. The colourshift- effect achieved thereby could however have been easily foreseen by the skilled man in the art as it is well known that a colour change would become visible dependent on the background a polymeric liquid crystal material is coated due to viewing the layer through direct or reflected light.

3.

The additional features of present dependent claims 2-7,13 and 15 are also described in D1 (see passages above). Therefore these claims do not appear to satisfy the criteria set forth in Article 33(2) PCT.

4.

Present claim 20 differs from D1 in that a machine readable structure is laminated to a second side of the film 11.

This additional step appears however a slight constructional change in the method and appears to come within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, the subject-matter of claim 20 also appears to lack an inventive step (Art. 33(3)).

5.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/00218

The additional features of present dependent claims 8-12,14,16-19 are regarded as common in the art and do not appear to contribute to solve any problem in an unexpected way. Therefore these claims do not appear to satisfy the criteria set forth in Article 33(3) PCT.

CLAIMS:

1. A method of manufacturing a substrate (10)
5 comprising the steps of applying a resist (13) to at least a part of a metallic layer (12) on a first side of a substantially transparent polymeric film (11), removing metal from areas not covered by the resist (13) to form demetallised regions,
10 characterised in that the resist (13) is darkly coloured and in that a layer of polymeric liquid crystal material (15) over the resist (13) and the demetallised regions.
- 15 2. A method as claimed in claim 1 in which the resist (13) contains a dye or pigment which is black or dark.
3. A method as claimed in claim 1 or claim 2, further comprising the step of applying a substantially clear resist
20 (15) to at least another part of the metallic layer (12).
4. A method as claimed in any one of the preceding claims in which the removal of metal in the demetallisation process is carried out with a caustic wash.
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5. A method as claimed in any one of the preceding claims in which negative indicia (14) are formed by the demetallised regions.
- 30 6. A method as claimed in any one of claims 1 to 4 in which positive indicia (14) are formed by the resist covered regions.

14a

7. A method as claimed in any one of the preceding

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AMENDED SHEET

CLAIMS:

1. A method of manufacturing a substrate (10) comprising the steps of applying a darkly coloured resist (13) to at least a part of a metallic layer (12) on a first side of a substantially transparent polymeric film (11), removing metal from areas not covered by the resist (13) to form demetallised regions and applying a polymeric liquid crystal material (15) over the resist (13) and the demetallised regions.
2. A method as claimed in claim 1 in which the resist (13) contains a dye or pigment which is black or dark.
3. A method as claimed in claim 1 or claim 2, further comprising the step of applying a substantially clear resist (15) to at least another part of the metallic layer (12).
4. A method as claimed in any one of the preceding claims in which the removal of metal in the demetallisation process is carried out with a caustic wash.
5. A method as claimed in any one of the preceding claims in which negative indicia (14) are formed by the demetallised regions.
6. A method as claimed in any one of claims 1 to 4 in which positive indicia (14) are formed by the resist covered regions.
7. A method as claimed in any one of the preceding